

A CASE OF SLEEPING SICKNESS
(*T. GAMBIENSE*) TREATED BY
'BAYER 205'

BY

J. W. W. STEPHENS,

AND

W. YORKE.

(Received for publication 20 November, 1922)

H.L.S. Act. 25.

No history of having been bitten by a tsetse fly, but in August, 1921, was for 2½ days in a tsetse belt at Wamba, South of Jemaa, N. Nigeria.

21.11.21. Took to bed with fever at Jemaa. Ill for 8 days, then recovered somewhat, but still unwell and had aching in legs.

—1.22. Glands in neck found to be enlarged, and a blood film was reported to contain trypanosomes. Was sent home.

9.3.22. On examination at the Liverpool School of Tropical Medicine the condition was as follows:—

Lymphatic glands behind the sterno-mastoid on both sides as large as marbles; axillary glands about the same size; inguinal glands (?) enlarged. A circinate rash over the back; over a V-shaped area on the chest, corresponding to the opening in the shirt, deep erythema, with some indication of pitting, probably due to sunburn. Pulse 112. Spleen not enlarged.

Blood examination.

Fresh films negative. Centrifuged blood, trypanosomes found, 1 to 10 fields.

Gland puncture.

A few trypanosomes found.

Animal inoculations.

1. Of 2 mice inoculated intraperitoneally with 0.4 c.c. of citrated blood, one became infected 29.3.22 and died 22.9.22; the other did not become infected.

2. A mouse inoculated intraperitoneally with a suspension of trypanosomes obtained by centrifuging 10 c.c. of the patient's blood showed trypanosomes 17.3.22. The animal is still alive and infected 6.11.22.

3. Various other mice were sub-inoculated from these and became infected. Most of the animals are still alive after six months, and occasionally show trypanosomes in their blood.

4. The trypanosome shows the morphological characters of *T. gambiense*.

Treatment.

- 10.3.22. *Atoxyl*, 0.45 gramme, subcutaneously.
 13.3.22. *Atoxyl*, 0.45 gramme, subcutaneously.
 17.3.22. *Novarsenobillon*, 0.6 gramme, intravenously.
 20.3.22. Glands smaller, one on right side as big as large pea. Weight, 124 lbs.
 20.3.22. *Novarsenobillon*, 0.9 gramme intravenously.
 23.3.22. Patient ill, temperature 103°, blood negative.
 27.3.22. Patient better, blood negative, auto-agglutination distinct.
 1.4.22. Patient feels well, glands greatly decreased, blood negative, very little auto-agglutination. Weight, 125½ lbs.
 8.4.22. Glands hardly palpable, pulse 130, blood negative.
 12.4.22. Pulse 108, blood negative, auto-agglutination distinct. Weight, 124 lbs.
 18.4.22. Pulse 112, blood negative. Weight, 126½ lbs.
 24.4.22. Glands doubtfully palpable, blood negative. Weight, 127¾ lbs.
 29.4.22. Pulse 120, blood negative. Weight, 132 lbs.
 6.5.22. Pulse 96, blood negative. Weight, 136½ lbs.
 14.5.22. Temperature 103°, blood negative. Weight, 137 lbs.
 19.5.22. Temperature 100°.
 26.5.22. Thick blood film negative. Weight, 137 lbs.
 27.5.22. Temperature 99°.
 28.5.22. Temperature 101.2°. Thick blood film (stained). 2 trypanosomes found.
 30.5.22. Temperature normal. 'Bayer 205,' 0.5 gramme intravenously. Patient vomited a minute or two after the injection.
 31.5.22. Temperature subnormal. Pulse 96. Urine no albumen.

- 1.6.22. Temperature subnormal. Pulse 78. 'Bayer 205,' 1.0 gramme intravenously.
- 3.6.22. Temperature subnormal. Pulse 92, a macular rash external to each mamma. 'Bayer 205,' 1.5 gramme intravenously.
- 8.6.22. Urine slightly turbid, no albumen.
- 27.6.22. Temperature normal. Urine slightly turbid, no albumen. 'Bayer 205,' 1.0 gramme intravenously.
- 20.11.22. Patient states that he has remained quite well without any rise of temperature since 27.6.22. Weight, 142 lbs. On examination: an acne-like rash over the back and sternum. Glands in neck not enlarged, but some just appreciable to palpation. Pulse 84-86, a little irregular. Respirations 17. Urine, no albumen. Centrifuged blood (5 c.c.) negative microscopically.

SUMMARY

The patient was presumably infected in Northern Nigeria in August, 1921, and had no treatment prior to his arrival in England in March, 1922, although trypanosomes had been found in his blood in January. When first seen in Liverpool on 9 March, trypanosomes were found both in the blood and gland juice. He was given subcutaneous injections of 0.45 gramme Atoxyl on 10 and 13 March, and intravenous injections of Novarsenobillon 0.6 gramme and 0.9 gramme on 17 and 20 March, respectively. These injections were attended by considerable rises of temperature which lasted up to 23 March.

As a result of this treatment the general condition of the patient rapidly improved, the rashes disappeared, the enlargement of the lymphatic glands almost completely subsided, the weight steadily increased, and trypanosomes could no longer be found in the blood. The pulse, however, remained frequent. Except for two rises to 100° F. on 27 March and 9 April, the temperature remained normal until 14 May, when it rose to 103° F. Frequent examinations of the blood during this period were negative. On 28 May the temperature rose to 101.2° F., and trypanosomes were found in the blood. On 30 May an intravenous injection of 'Bayer 205,' 0.5 gramme was given, a second injection of 1 gramme on 1 June and a third of 1.5 gramme on 3 June: the temperature fell to normal after the

first injection, and has since remained normal. The blood was negative on 31 May and also on 3, 8, and 27 June, and the general condition of the patient remained good. No albuminuria developed. On 27 June an intravenous injection of 'Bayer 205,' 1 gramme was given as a 'prophylactic' measure, and since then he has remained in good health.

We are indebted to Messrs. Friedr. Bayer & Co., Elberfeld, for kindly supplying us with a quantity of 'Bayer 205.'

NOTE.

In a previous paper by Yorke (1921), details are given of the treatment by 'Bayer 205' in July, 1921, of a case of Rhodesian sleeping sickness. The patient, who is now back in Rhodesia, has remained in excellent health up to the present time.

REFERENCE

- YORKE, W. (1921). The Treatment of a case of Rhodesian Sleeping Sickness by the preparation known as 'Bayer 205.' *Ann. Trop. Med. and Parasitol.*, Vol. XV, p. 479.